



# THE MUSIC SYSTEM

DRAFT VERSION 0.1

## The Music System

The music system in GameGuru allows the playback of music in two ways: a simple fade in/out system, and a system which switches music based on certain timing intervals. This allows for simple playback of different unrelated song loops, or the playback of loops specifically composed to work together.

Currently the music system requires the modification of LUA scripts to customise playback, but simple editor tools are planned for the near future. So if you want to start playing around with music right now, here's what you need to know...

### Setting Up

The music system currently supports 4 different music tracks which are preloaded at the start of the level. These are specified in scriptbank/music.lua. You will notice a bunch of constant definitions at the top of the script which you need to edit. Music.lua is a global script, initialised at the start of the game and should not be used as the script for a trigger zone or entity. These look like this:

```
MUSIC_TRACK1 = "\\audiobank\\music\\mymusic1.ogg";  
MUSIC_TRACK1_INTERVAL = 3692;  
MUSIC_TRACK1_LENGTH = 29536;
```

To load in a music track, put the path and file name of the music track in between the quotes of the MUSIC\_TRACK constant. Remember this path is relative to your Files directory. A good place to put your music tracks is audiobank\\music, so you would reference your music with "\\audiobank\\music\\mymusic1.ogg". If you don't have 4 music tracks, leave the other constants with empty quotes "". Also note the proceeding backslashes and use of double backslashes!

MUSIC\_TRACK1\_LENGTH is the loop point for your music track in milliseconds. Typically, if you are using a seamless loop, this will be the total length of your music track. In the example we see our TRACK1 is 29.536 seconds long.

MUSIC\_TRACK1\_INTERVAL is used by the dynamic music system and specifies the points at which a track can be interrupted and changed to another one. The time is in milliseconds. In this example we see the value 3692. This is the total length of the track divided by 8. This means that when the music system wants to play a different piece of music, it will wait until this piece of the music is at one of these 1/8 intervals before fading it out and starting the new piece of music. This is what allows for timed dynamic music play back.

MUSIC\_TRACK\_DEFAULT specifies the main piece of music. This is the piece of music that will be returned to when combat music or other temporary music has finished playing. Typically this will be your more sedate backing music loop. If you set this value to 0 there will be no default music and nothing will play until a specific music event happens. Default music is faded in over 10 seconds at the start of the game.

## Playing Music

Music.lua contains many functions that you can call from your scripts to control music playback. Have a look at this video to see what's possible:

<https://www.youtube.com/watch?v=aQSXywgwRYo>

Each function has a brief comment to explain what it does. Here is a very basic overview:

music_play()	call this function to simply fade old music out and new music in
music_play_cue()	call this function to play music using the interval system (waiting for the next cue point)
music_play_time()	call this function to play some music for a period of time then return to the default music
music_play_timecue()	as above, but using the interval system (waiting for a cue points)

If you want to change the music when a player runs into a zone on the map:

1. Create a Sound Zone entity in the editor
2. Change soundInZone.lua to a new script name. Maybe "ChangeMusic.lua"
3. Create a new text file called "ChangeMusic.lua" in the scriptbank folder
4. Add this code:

```
function ChangeMusic_main(e)
if g_Entity[e]['plrInzone']==1 then
music_play_cue(3,500);
end
end
```

This will then change the music to TRACK3, fading in over 500 ms. This is the basis for your music manipulation. Change the music\_play\_cue() command for other commands found in music.lua to control your music playback. Maybe set a new default track? Maybe change the volume? Play track for a short period of time? It's up to you!

## Current Music Calls

Since music is script based, it can be called from anywhere in your LUA scripts. The current locations where the engine is making music calls are located here:

music.lua - music_init()	The default track is set playing at the start of your game. To stop this behaviour, set the MUSIC_TRACK_DEFAULT constant to 0.
global.lua - PlayCombatMusic()	This is called from many AI routines when AI go into combat mode. This sets TRACK 2 playing for a period of time. If you didn't want your AI to kick off the playing of track 2, you could modify this function to point at another track number, or not call the music_play_timecue function at all.

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